

DJW

PATENT

Attorney Docket No. A-65686-2
Attorney File No.: 463037-00268

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

DUONG *et al.*

Serial No. 10/714,489

Filed: November 14, 2003

For: *Signal Detection Techniques for
the Detection of Analytes*

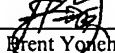
Examiner: LU, Frank Wei-Min

Art Unit: 1634

CERTIFICATE OF MAILING

I hereby certify that this correspondence, including listed enclosures, are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

Date: April 28, 2006

Signature: 
Brent Yonchara

INFORMATION DISCLOSURE STATEMENT
AND
STATEMENT OF RELATEDNESS

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants wish to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form PTO/SB/8A. In accordance with 1287 Off. Gaz. Pat. Office 163 (October 19, 2004), no copies of U.S. patents and U.S. published applications are enclosed.

Further, this application is a continuation of the following related U.S. Application – Serial No. 09/397,957, filed September 17, 1999 (now U.S. Patent No. 6,740,518, issued May 24, 2004), upon which the instant application relies for its priority date. Applicants wish to draw the attention of the U.S. Patent and Trademark Office to the references cited on the

accompanying substitute for form PTO-1449. Since these references were previously disclosed by either Applicants or the Examiner in the above-mentioned application, in accordance with 37 C.F.R. § 1.98(d), no copies of these references are enclosed.

Further, in satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and as required by M.P.E.P. § 2001.06(b), Applicant notes that the present application is related to the following pending patent applications:

1. U.S.S.N. 09/557,577, filed April 21, 2000; U.S.S.N. 11/295,993, filed December 6, 2005; U.S.S.N. 11/343,462, filed January 30, 2006;
2. U.S.S.N. 08/873,597, filed June 12, 1997;
3. U.S.S.N. 11/283,233, filed November 18, 2005;
4. U.S.S.N. 09/712,792, filed November 13, 2000; U.S.S.N. 11/083,780, filed March 16, 2005; and
5. U.S.S.N. 09/245,105, filed January 27, 1999.

Applicants additionally note that the referenced cited as A42, A50, A53, A58, A66, A69-A70, A76-A79, and A82-A109 on the accompanying substitute for form PTO-1449 as are published or issued co-pending or related applications.

Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

As far as is known to the undersigned, this Information Disclosure Statement is being filed within three months of the filing date of a national application, within three months of the

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Filed: November 14, 2003

date of entry of the national state in an international application, or before the mailing date of a first Office Action on the merits as set forth in 37 C.F.R. § 1.97(b), and therefore no fee is required.


While no further fee is believed to be due, if this belief is in error, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. 463037-00268; Our Docket No.: A-65686-2).

Please direct further questions in connection with this Application to the undersigned at (415) 781-1989.

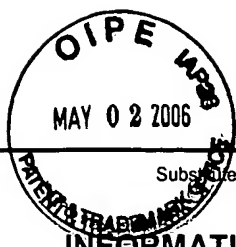
Respectfully submitted,
DORSEY & WHITNEY LLP

Dated: April 27, 2006
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San Francisco, CA 94104-1513
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Facsimile: (415) 398-3249

By:


Timothy A. Worrall, Reg. No. 54,552 for
Robin M. Silva, Reg. No. 38,304

Attachments: Form SB/08/A-B, substitute for Form PTO-1449
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/714,489
				Filing Date	November 14, 2003
				First Named Inventor	DUONG, Hau
				Art Unit	1634
				Examiner Name	LU, Frank Wei Min
Sheet	1	of	15	Attorney Docket Number	A-65686-2 (463037-00268)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	4,704,193	11-03-1987	Bowers et al.	
	A2	4,707,352	11-17-1987	Stavrianopoulos	
	A3	4,707,440	11-17-1987	Stavrianopoulos	
	A4	4,711,955	12-08-1987	Ward et al.	
	A5	4,755,458	07-55-1988	Rabbani et al.	
	A6	4,787,963	11-29-1988	MacConnell	
	A7	4,840,893	06-20-1989	Hill et al.	
	A8	4,849,513	07-18-1989	Smith et al.	
	A9	4,868,103	09-19-1989	Stavrianopoulos et al.	
	A10	4,882,013	11-21-1989	Turner et al.	
	A11	4,894,325	01-16-1990	Englehardt et al.	
	A12	4,943,523	07-24-1990	Stavrianopoulos	
	A13	4,945,045	07-24-1984	Forrest et al.	
	A14	4,952,685	08-28-1990	Stavrianopoulos	
	A15	4,964,972	10-23-1990	Sagiv et al.	
	A16	4,994,373	02-19-1991	Stavrianopoulos	
	A17	5,002,885	33-26-1991	Stavrianopoulos	
	A18	5,013,831	05-07-1991	Stavrianopoulos	
	A19	5,066,372	11-19-1991	Weetall	
	A20	5,082,830	01-21-1992	Brakel et al.	
	A21	5,089,112	02-18-1992	Skotheim et al.	
	A22	5,175,269	12-29-1992	Stavrianopoulos	
	A23	5,180,968	01-19-1993	Bruckenstein et al.	
	A24	5,241,060	8-31-1993	Englehardt et al.	
	A25	5,242,828	09-07-1993	Bergstrom et al.	
	A26	5,278,043	01-11-1995	Bannwarth et al.	

Examiner Signature		Date Considered	
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*EXAMINER: † These references were previously cited in a related application relied upon for an earlier filing date under 35 USC 120 and no copies are submitted in accordance with 37 CFR 1.98(d). Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
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				Examiner Name	LU, Frank Wei Min
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	A27	5,312,527	05-17-1994	Mikkelsen et al.	
	A28	5,328,824	07-12-1994	Ward et al.	
	A29	5,356,786	10-18-1994	Heller et al.	
	A30	5,391,272	02-21-1995	O'Daly et al.	
	A31	5,403,451	04-04-1995	Riviello et al.	
	A32	5,436,161	07-25-1995	Bergstrom et al.	
	A33	5,443,701	08-22-1995	Willner et al.	
	A34	5,449,767	09-12-1995	Ward et al.	
	A35	5,472,881	12-05-1995	Beebe et al.	
	A36	5,476,928	12-19-1995	Ward et al.	
	A37	5,495,908	01-21-1997	Fawcett et al.	
	A38	5,552,270	09-03-1996	Khrapko et al.	
	A39	5,565,552	10-15-1996	Magda et al.	
	A40	5,571,568	11-05-1996	Ribi et al.	
	A41	5,573,906	11-12-1996	Bannwarth et al.	
	A42	5,591,578	01-07-1997	Meade et al.	
	A43	5,601,982	02-11-1997	Sargent et al.	
	A44	5,620,850	04-15-1997	Bamdad et al.	
	A45	5,622,821	04-22-1997	Selvin et al.	
	A46	5,632,957	05-27-1997	Heller et al.	
	A47	5,650,061	07-22-1997	Kuhr et al.	
	A48	5,700,667	12-23-1997	Marble et al.	
	A49	5,705,346	01-06-1998	Okamoto et al.	
	A50	5,705,348	01-06-1998	Meade et al.	
	A51	5,741,700	04-01-1998	Ershov et al.	
	A52	5,756,050	05-26-1998	Ershov et al.	

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				Art Unit	1634
				Examiner Name	LU, Frank Wei Min
Sheet	3	of	15	Attorney Docket Number	A-65686-2 (463037-00268)

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	A53	5,770,369	06-23-1998	Meade et al.	
	A54	5,770,721	06-23-1998	Ershov et al.	
	A55	5,776,672	07-07-1998	Hashimoto et al.	
	A56	5,780,234	07-14-1998	Meade et al.	
	A57	5,795,453	08-18-1998	Gilmartin	
	A58	5,824,473	10-20-1998	Meade et al.	
	A59	5,837,859	11-17-1998	Teoule et al.	
	A60	5,849,486	12-15-1998	Heller et al.	
	A61	5,851,772	12-15-1998	Mirzabekov et al.	
	A62	5,874,046	02-23-1999	Megerle	
	A63	5,952,172	09-14-1999	Meade et al.	
	A64	5,976,802	11-02-1999	Ansorge et al.	
	A65	6,013,170	01-11-2000	Meade	
	A66	6,013,459	01-11-2000	Meade	
	A67	6,060,023	05-09-2000	Maracas	
	A68	6,060,327	05-09-2000	Keen	
	A69	6,071,699	06-06-2000	Meade et al.	
	A70	6,087,100	07-11-2000	Meade et al.	
	A71	6,090,933	07-18-2000	Kayyem et al.	
	A72	6,096,273	08-01-2000	Kayyem et al.	
	A73	6,096,825	08-01-2000	Garnier et al.	
	A74	6,107,080	08-22-2000	Lennox	
	A75	6,153,737	11-28-2000	Manoharan et al.	
	A76	6,177,250 B1	01-23-2001	Meade et al.	
	A77	6,180,352 B1	01-30-2001	Meade et al.	
	A78	6,197,515 B1	03-06-2001	Bamdad et al.	
	A79	6,200,761 B1	03-13-2001	Meade et al.	

Examiner Signature	Date Considered
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	A80	6,203,758 B1	03-20-2001	Marks et al.	
	A81	6,207,369 B1	03-27-2001	Wohlstadter et al.	
	A82	6,221,583 B1	04-24-2001	Kayyem et al.	
	A83	6,232,062 B1	05-15-2001	Kayyem et al.	
	A84	6,238,870 B1	05-29-2001	Meade et al.	
	A85	6,248,229 B1	06-19-2001	Meade	
	A86	6,258,545 B1	07-10-2001	Meade et al.	
	A87	6,264,825 B1	07-24-2001	Blackburn et al.	
	A88	6,268,149 B1	07-31-2001	Meade et al.	
	A89	6,268,150 B1	07-31-2001	Meade et al.	
	A90	6,277,576 B1	08-21-2001	Meade et al.	
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	A92	6,306,584 B1	10-23-2001	Bamdad	
	A93	6,322,979 B1	11-27-2001	Bamdad et al.	
	A94	6,479,240 B1	11-12-2002	Kayyem	
	A95	6,495,323 B1	12-17-2002	Kayyem et al.	
	A96	6,686,150 B1	02-03-2004	Blackburn et al.	
	A97	6,740,518 B1	05-24-2004	Duong et al.	
	A98	6,761,816 B1	07-13-2004	Blackburn et al.	
	A99	6,977,151 B2	12-20-2005	Kayyem et al.	
	A100	7,014,992 B1	03-21-2006	Kayyem et al.	
	A101	7,018,523 B2	03-28-2006	Meade	
	A102	2001-0034033 A1	10-25-2001	Meade et al.	
	A103	2001-0046679 A1	11-15-2001	Meade et al.	
	A104	2002-0006643 A1	01-17-2002	Kayyem et al.	
	A105	2003-0148328 A1	08-07-2003	Kayyem et al.	
	A106	2003-0150723 A1	08-14-2003	Kayyem et al.	
	A107	2004-0010890 A1	05-27-2004	Meade et al.	
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	A108	2005-0003399 A1	01-06-2005	Blackburn et al.	
	A109	2005-0053962 A1	03-10-2005	Irvine et al.	

FOREIGN PATENT DOCUMENTS						
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	B1	CA 2,090,904	09-24-1993	Hoffman LaRoche		
	B2	EP 0 229 943 A1	07-29-1987	Molecular Biosystems, Inc.		
	B3	EP 0 234 938 A2	02-26-1987	Cranfield Institute of Technology		
	B4	EP 0 599 337 A1	01-16-1994	Canon K.K.		
	B5	EP 0 063 879 A1	11-03-1982	Yale University		
	B6	EP 0 668 502 A2	08-23-1995	Yissum Research Development		
	B7	EP 0 515 615 A1	09-04-1996	Boehringer Mannheim		
	B8	JP 63-238166	10-04-1988	Mitsubishi Chemical, Ltd.		
	B9	JP 6-041183	02-15-1994	Mitsubishi Chemical, Ltd.		
	B10	WO 86/05815 A1	10-09-1986	Genetics International, Inc.		
	B11	WO 90/05303 A1	05-17-1990	Pharmacia AB		
	B12	WO 90/05732 A1	05-31-1990	The Trustees of Columbia University in the City of New York		
	B13	WO 92/10757 A1	06-25-1992	Boehringer Mannheim		
	B14	WO 93/10267 A1	05-27-1993	Igen, Inc.		
	B15	WO 93/22678 A2/A3	11-11-1993	Massachusetts Institute of Technology		
	B16	WO 93/23425 A1	11-25-1993	The Ontario Cancer Institute		
	B17	WO 94/22889 A1	10-13-1994	Cis Bio International		
	B18	WO 95/15971 A2/A3	06-15-1995	California Institute of Technology		
	B19	WO 96/40712 A1	12-19-1996	California Institute of Technology		

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				First Named Inventor	DUONG, Hau
				Art Unit	1634
				Examiner Name	LU, Frank Wei Min
Sheet	6	of	15	Attorney Docket Number	A-65686-2 (463037-00268)

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	B20	WO 97/01646 A1	01-16-1997	University of North Carolina		
	B21	WO 97/27329 A1	07-31-1997	University of North Carolina		
	B22	WO 97/31256 A1	08-28-1997	Cornell Research Foundation		
	B23	WO 97/41425 A1	11-06-1997	Pence, Inc.		
	B24	WO 97/44651 A1	11-27-1997	Australia Membrane and Biotechnology Institute		
	B25	WO 97/46568 A1	12-11-1997	California Institute of Technology		
	B26	WO 98/12539 A1	03-26-1998	Meso Scale Technologies, LLC		
	B27	WO 98/20162 A2/A3	05-14-1998	Clinical Micro Sensors, Inc.		
	B28	WO 98/27229 A1	06-25-1998	The University of Chicago		
	B29	WO 98/28444 A2/A3	07-02-1998	The University of Chicago		
	B30	WO 98/31839 A2/A3	07-23-1998	President & Fellows of Harvard College		
	B31	WO 98/35232 A2/A3	08-13-1998	University of North Carolina at Chapel Hill		
	B32	WO 98/51823 A1	11-19-1998	Mosaic Technologies LLC		
	B33	WO 98/57158 A1	12-17-1998	Clinical Micro Sensors, Inc.		
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	B35	WO 99/14596 A1	03-25-1999	AB Sangtec Medical		
	B36	WO 99/29711 A1	06-17-1999	Nanogen Inc.		
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	B38	WO 99/57317 A2/A3	11-11-1999	Clinical Micro Sensors, Inc.		
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	B40	WO 99/67425 A2/A3	12-29-1999	Clinical Micro Sensors, Inc.		

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	C1	AIZAWA, M., et al., "Integrated molecular systems for biosensors," <i>Sens. Actuators B Chem.</i> 24(1&3):1-5 (Mar. 1995).	
	C2	ALBERS, W., et al., "Design of novel molecular wires for realizing long-distance electron transfer," <i>Bioelectrochem. Bioenerg.</i> 42(1):25-33 (Apr. 1997).	
	C3	ALLEMAN, K.S., et al., "Electrochemical rectification at a monolayer-modified electrode," <i>J. Phys. Chem.</i> 100:17050-17058 (1996).	
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	C9	BEATTIE, K., et al., "Genosensor Technology," <i>Clin. Chem.</i> 39(4):719-722 (1993).	
	C10	BECHTOLD, R., et al., "Ruthenium-modified horse heart cytochrome c: effect of pH and ligation on the rate of intramolecular electron transfer between ruthenium(II) and heme(III)," <i>J. Phys. Chem.</i> 90(16):3800-3804 (Jul. 1986).	
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				Application Number	10/714,489
				Filing Date	November 14, 2003
				First Named Inventor	DUONG, Hau
				Art Unit	1634
				Examiner Name	LU, Frank Wei Min
Sheet	11	of	15	Attorney Docket Number	A-65686-2 (463037-00268)

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	C66	KELLY, S.O., et al., "Electrochemistry of methylene blue bound to a DNA-modified electrode," <i>Bioconjugate Chem.</i> 8:31-37 (1997).		
	C67	KOJIMA, H., et al., "A DNA probe of ruthenium bipyridine complex using photocatalytic activity," <i>Chem. Lett.</i> 18:1889-1982 (1989).		
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	C70	LAVIRON, E., "A.C. polarography and Faradaic impedance of strongly adsorbed electroactive species. part I: theoretical and experimental study of a quasi-reversible reaction in the case of a Langmuir isotherm," <i>J. Electroanal. Chem.</i> 97(2):135-149 (Mar. 1979).		
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	C75	LIVSHITS, M., et al., "Theoretical analysis of the kinetics of DNA hybridization with gel-immobilized oligonucleotides," <i>Biophys. J.</i> 71:2795-2801 (Nov. 1996).		
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	C81	MEADE, T., et al., "Electron transfer through DNA: site-specific modification of duplex DNA with ruthenium donors and acceptors," <i>Angew Chem. Int. Ed. Engl.</i> 34(3):352 (Feb. 1995).	
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	C97	PATERSON, D., "Electric genes: current flow in DNA could lead to faster genetic testing," <i>Sci. Am.</i> pp. 33-34 (May 1995).	
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	C112	SINGHAL, P., et al., "Ultrasensitive voltammetric detection of underivatized oligonucleotides and DNA," <i>Anal. Chem.</i> 69(23):4828-4832 (Dec. 1997).		
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	C127	UOSAKI, K., et al., "A self-assembled monolayer of ferrocenylalkane thiols on gold as an electron mediator for the reduction of Fe(III)-EDTA in solution," <i>Electrochim. Acta.</i> 36(11/12):1799-1801 (1991).	
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	C135	XU, X., et al., "Immobilization and hybridization of DNA on an aluminum(III) alkanebisphosphonate thin film with electrogenerated chemiluminescent detection," <i>J. Am. Chem. Soc.</i> 117(9):2627-2631 (Mar. 1995).	
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Examiner Signature	Date Considered
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*EXAMINER: † These references were previously cited in a related application relied upon for an earlier filing date under 35 USC 120 and no copies are submitted in accordance with 37 CFR 1.98(d). Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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